



Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137



Federally Enforceable District Origin Operating Permit (FEDOOP)

Permit No.: O-0610-19-F

Plant ID: 0610

Effective Date: 04/22/2019

Expiration Date: 04/30/2024

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Source: Mt. Carmel Stabilization Group, Inc	Owner: Mt. Carmel Stabilization Group, Inc
3121 S. Floyd St.	PO Box 458
Louisville, KY 40209-1827	1611 College Dr.
	Mt. Carmel, IL 62863

The applicable procedures of District Regulation 2.17 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than twelve months and no later than ninety days prior to the expiration date.

Emission limitations to qualify for non-major status:

Pollutant: PM₁₀
Tons/year: 25

Application No.: See **Application and Related Documents** table.
Public Notice Date: 03/19/2019

Permit writer: Rick Williams

A handwritten signature in blue ink, appearing to read "Matt K.", is positioned above the title of the Air Pollution Control Officer.

Air Pollution Control Officer
4/22/2019

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FEDOOP Permit Revisions/Changes

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
27715-13-F	02/28/2014	03/14/2014	Initial	Initial permit issuance
27715-13-F (R1)	06/30/2018	07/31/2018	Admin	Company name change
			Sig	Removal of Greenhouse Gas limits from General Condition 10
O-0610-19-F	03/19/2019	04/22/2019	Renew	Renew FEDOOP operating permit

Application and Related Documents

Document Number	Date Received	Description
95701	11/05/2018	Conformation of consultant status
95803	11/06/2018	Initial discussion regarding forms required for renewal application
95937	11/08/2018	Additional email regarding forms required for renewal application
96546	12/18/2018	Reminder of approaching application deadline
96583	12/27/2018	Renewal application
96586	12/31/2018	Follow application material (signed form 100K)
97579	03/15/2019	Pre-draft permit for review sent to company (company did not have comments)

Abbreviations and Acronyms

AP-42	- AP-42, <i>Compilation of Air Pollutant Emission Factors</i> , published by U.S.EPA
APCD	- Louisville Metro Air Pollution Control District
BAC	- Benchmark Ambient Concentration
BACT	- Best Available Control Technology
Btu	- British thermal unit
CEMS	- Continuous Emission Monitoring System
CFR	- Code of Federal Regulations
CO	- Carbon monoxide
District	- Louisville Metro Air Pollution Control District
EA	- Environmental Acceptability
gal	- U.S. fluid gallons
GHG	- Greenhouse Gas
HAP	- Hazardous Air Pollutant
Hg	- Mercury
hr	- Hour
in.	- Inches
lbs	- Pounds
l	- Liter
LMAPCD	- Louisville Metro Air Pollution Control District
mmHg	- Millimeters of mercury column height
MM	- Million
NAICS	- North American Industry Classification System
NO _x	- Nitrogen oxides
PM	- Particulate Matter
PM ₁₀	- Particulate Matter less than 10 microns
PM _{2.5}	- Particulate Matter less than 2.5 microns
ppm	- parts per million
PSD	- Prevention of Significant Deterioration
psia	- Pounds per square inch absolute
QA	- Quality Assurance
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO ₂	- Sulfur dioxide
STAR	- Strategic Toxic Air Reduction
TAC	- Toxic Air Contaminant
UTM	- Universal Transverse Mercator
VOC	- Volatile Organic Compound
w.c.	- Water column
year	- Any period of twelve consecutive months, unless "calendar year" is specified
yr	- Year, or any 12 consecutive-month period, as determined by context

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

1. The owner or operator shall comply with all General Conditions herein and all terms and conditions in the referenced process/process equipment list.
2. All terms and conditions in this FEDOOP are enforceable by EPA, except those terms and conditions specified as District-only enforceable, and those which are not required pursuant to the Clean Air Act Amendments of 1990 (CAAA) or any of the Act's applicable requirements.
3. All application forms, reports, compliance certifications, and other relevant information submitted to the District shall be certified by a responsible official. If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.
4. The owner or operator shall submit an annual compliance certification, signed by the responsible official, to the District, on or before April 15 of the year following the year for which the certification applies. This certification shall include completion of District Form 9440-O.
5. Periodic testing, instrumental monitoring, or non-instrumental monitoring, which may include record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstrating continuing compliance with the terms and conditions of this permit.
6. The owner or operator shall retain all records required by the District or any applicable requirement, including all required monitoring data and supporting information, for a period of five years from the date of the monitoring, sampling, measurement, report, or application, unless a longer time period for record retention is required by the District or an applicable requirement. Records shall be retrievable within a reasonable time and made available to the District, Kentucky Division for Air Quality, or the EPA upon request.

7. The owner or operator shall provide written notification to the District, and receive approval, prior to making any changes to existing equipment or processes that would result in emissions of any regulated pollutant in excess of the allowable emissions specified in this permit.
8. This permit may be reissued, revised, reopened, or revoked pursuant to District Regulation 2.17. Repeated violations of permit conditions are sufficient cause for revocation of this permit. The filing of a request by the owner or operator for any reissuance, revision, revocation, termination, or a notification of planned changes in equipment or processes, or anticipated noncompliance shall not alter any permit requirement.
9. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed either 10 tons per year, or such lesser quantity as the EPA has established by rule, of any one Hazardous Air Pollutant (HAP) or 25 tons per year of all HAPs combined. Fugitive HAP emissions shall be included in this limit. HAPs are listed in Section 112(b) of the CAAA and as amended in 40 CFR 63, Subpart C.
10. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed 100 tons per year of any regulated pollutant, including particulate matter, PM₁₀, PM_{2.5}, sulfur dioxide, carbon monoxide, nitrogen oxides, lead, hydrogen sulfide, gaseous fluorides, total fluorides, or Volatile Organic Compounds (VOC); any pollutant subject to any standard in District Regulation 7.02; or any substance listed in sections 112(r), 602(a) and 602(b) of the CAAA. Fugitive emissions shall be included in these limits for source categories listed in District Regulation 2.16.
11. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.
12. Unless specified elsewhere in this permit, the owner or operator shall submit annual reports demonstrating compliance with the emission limitations specified. The report shall contain monthly and consecutive 12-month totals for each pollutant that has a federally enforceable limitation on the potential to emit. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All annual compliance reports shall include the following per Regulation 2.17, section 3.5.
 - A certification statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete", and
 - The signature and title of a responsible official of the company.

The report must be postmarked no later than March 1 of the year following the calendar year covered in the annual report.

13. The owner or operator shall comply with all applicable requirements of the following federally enforceable District Regulations:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance With Emissions Standards And Maintenance Requirements
1.06	Source Self-Monitoring, Emission Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
1.18	Rule Effectiveness
1.19	Administrative Hearings
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.04	Construction or Modification of Major Sources in or Impacting Upon Non-Attainment Areas (Emission Offset Requirements)
2.05	Prevention of Significant Deterioration
2.06	Permit Requirements – Other Sources
2.07	Public Notification for Title V, PSD, and Other Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
3.01	Ambient Air Quality Standards
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.04	Particulate and Sulfur Dioxide Reduction Requirements
4.05	Hydrocarbon and Nitrogen Oxides Reduction Requirements
4.06	Carbon Monoxide Reduction Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions (Existing Affected Facilities)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (New Affected Facilities)

14. The owner or operator shall comply with all applicable requirements of the following District-only enforceable regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors
2.08	Emission Fee, Permit Fees and Permit Renewal Procedures
2.17	Federally Enforceable District Origin Operating Permits
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards

15. The owner or operator shall submit emission inventory reports, as required by Regulation 1.06, if so notified by the District.
16. The owner or operator shall submit timely reports of abnormal conditions or operational changes that may cause excess emissions, as required by Regulation 1.07.
17. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit shall be submitted to:

***Air Pollution Control District
701 W. Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137***

Emission Unit U1: Lime Kiln-Dust Storage Facility**U1 Applicable Regulations**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
2.17	Federally Enforceable District Origin Operating Permit	All
7.08	Standards of Performance for New Process Operations	1, 2, and 3

DISTRICT-ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E2	Lime kiln-dust silo, 500 ton capacity	1985	2.17 7.08	C1	S1
E3	Lime kiln-dust silo, 600 ton capacity	1989		C1	S1
E4	Truck loader, Vaculoader, 450 ton/hr	1985		C2	S2

Control Devices

Control ID	Description	Control Efficiency	Performance Indicator
C1	Baghouse, Griffin, model JC54-3X, 3000 cfm	98%	Visual inspection
C2	Baghouse, Midwest, model MV-235-1.5, 1500 cfm	98%	Visual inspection

U1 Specific Conditions

S1. Standards

[Regulation 2.17, section 5.1]

a. Opacity

- i. The owner or operator shall not allow visible emissions to equal or exceed 20% opacity. [Reg. 7.08, section 3.1.1]

b. PM/PM₁₀

- i. The owner or operator shall not allow or cause total plant-wide PM₁₀ emissions to equal or exceed 25 tons during any consecutive 12-month period.^{1 2} [Regulation 2.17, section 5.1] [Regulation 5.00, section 1.13.5.1]
- ii. The owner or operator shall not allow or cause total plant-wide PM emissions to equal or exceed 25 tons during any consecutive 12-month period.³ [Regulation 5.00, section 1.13.5.1]
- iii. The owner or operator shall not allow PM emissions to exceed 38.6 lb/hr for each silo filling operation (E2 and E3) based on actual operating hours in a calendar day.⁴ [Reg 7.08, section 3.1.2]
- iv. The owner or operator shall not allow PM emissions to exceed 46.0 lb/hr at the bulk transit truck loading operation (E4) based on actual operating hours in a calendar day.⁴ [Regulation 7.08, section 3.1.2]

S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. The owner or operator shall conduct a monthly 1-minute visible emissions survey of the emission points during normal operation. No more than four

¹ The source is potentially major for PM₁₀. The source accepted a limit of 100 tons per year for PM₁₀ as a FEDOOP limit.

² The source has request exemption from the STAR regulations. This requires that PM₁₀ emissions remain less than 25 tons per year.

³ The source has request exemption from the STAR regulations. This requires that PM emissions remain less than 25 tons per year.

⁴ Uncontrolled PM emissions at each emission point can exceed the Regulation 7.08 lb/hr emission limit for the emission point, therefore particulate controls must be used when the respective operations are performed to insure compliance.

emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure. The emission points to be surveyed shall include the emissions points listed below:

- (1) Lime kiln-dust silo filling
 - (2) Bulk lime kiln-dust transit truck loadout
 - (3) Dust collection ductwork
- ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist the owner or operator shall perform or cause to be performed a Method 9 test in accordance with 40 CFR Part 60, Appendix A within 24 hours of the initial observation.
 - iii. The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether visible emissions were observed, and what, if any, corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. PM/PM₁₀

- i. The owner or operator shall, monthly, perform a visual inspection of the structural and mechanical integrity of the process equipment for signs of damage, air leakage, corrosion, etc. and repair shall be performed as needed.
- ii. The owner or operator shall keep records, monthly of the visual inspection of the structural and mechanical integrity of the process equipment.
- iii. The owner or operator shall maintain records, monthly, of the below listed items:
 - (1) Monthly amount of tons of lime kiln-dust and the previous twelve consecutive month period total of tons of lime kiln-dust loaded into the silos and loaded into bulk transit trucks.
 - (2) The owner or operator shall calculate and record, during the first week of the following month, the monthly total and the twelve consecutive month total emissions of the pollutant PM/PM₁₀ using the calculation methodology shown in Appendix A.
 - (3) The owner or operator shall maintain daily records of any periods of time where the process was operating and the control device

was not operating or a declaration that the control device operated at all times that day when the process was operating.

- (4) If there is any time that the control devices are bypassed or not in operation when the process operated, the owner or operator shall keep a record of the following for each bypass event:
 - (a) Date;
 - (b) Start time and stop time;
 - (c) Identification of the control device and the uncontrolled emission point(s);
 - (d) Tons of material throughput during the bypass
 - (e) PM emissions in lb/hr during the bypass;
 - (f) PM/PM₁₀ emissions in tons during the bypass
 - (g) Summary of the cause or reason for each bypass event;
 - (h) Corrective action taken to minimize the extent or duration of the bypass event; and
 - (i) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

S3. Reporting

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition 12:

a. Opacity

- i. The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If no visible emissions were observed during the reporting period, the owner or operator may submit a negative declaration.
- ii. The date, time and results of each Method 9 test conducted. If there were no Method 9 tests performed during the reporting, the owner or operator may submit a negative declaration.
- iii. Description of any corrective action taken for each exceedance of the opacity standard.

b. PM/PM₁₀

- i. The owner or operator shall report the monthly twelve consecutive month period totals of plant-wide emissions of the pollutant PM/PM₁₀.

- ii. The owner or operator shall report the following information regarding each PM and PM₁₀ bypass activity in the annual compliance reports:
- (1) Emission point at which the by-pass occurred;
 - (2) Date and duration (including the start and stop time) during which a bypass occurred;
 - (3) The rate of PM emitted in lb/hr that is larger than the standard, during the bypass;
 - (4) The quantity of PM₁₀ in tons emitted during the bypass;
 - (5) Summary information on the cause or reason for the by-pass activity;
 - (6) Corrective action taken to minimize the extent and duration of each bypass event;
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in by-pass emissions; or
 - (8) If no deviations occur during the annual reporting period, the report shall contain a negative declaration.
 - (9) By-pass PM/PM₁₀ emissions shall be included in the monthly twelve consecutive month period totals of plantwide PM/PM₁₀ emissions.

Appendix A – Calculation Methodology

Where appropriate, the emissions shall be calculated according to the following methodology or another method approved in writing by the District. Emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc.) or hours of operation of the equipment by the appropriate emission factor and take into account control devices, if applicable.

$$[Emission = throughput \times emission\ factor \times (1 - control\ efficiency)]$$

Where this is not an appropriate methodology, another method is shown.

In lieu of recording annual throughputs and calculating actual annual emissions, the owner or operator may elect to report the pollutant Potential To Emit (PTE) quantity listed in the Insignificant Activities table, as the annual emission for each piece of equipment that is designated as an IA.

Emission Point	Description	Emission Factor (lb/ton)			
		Uncontrolled		Controlled ⁵	
		PM	PM ₁₀	PM	PM ₁₀
E2, E3	Lime kiln-dust silos #1 and #2	0.73	0.47	0.00099	0.00034
E4	Truck Loader	0.61	0.61	0.0122	0.0122

⁵ The controlled emission factors for E1 are those shown in AP42, 11.12-2. The controlled emission factors for E4 are calculated from the uncontrolled AP42, 11.17-4 emission factors and the District default control efficiency of 98% for baghouses.

Fee Comment

The company is required to pay annual fees.